April 10, 2019

Source Water Protection Strategy Update

Local, State, and Federal Partnerships Meeting #1 - Summary

9:30am-12:30pm

Introduction

Pierce Rigrod began the meeting with an outline of the agenda and then described the purpose and organization of the Source Water Protection Strategy Update.

Pierce Rigrod began the meeting with an introduction to one of the goals of the Source Protection Program, which is to improve collaboration/communication and bridge gaps between the programs at DES working with the Clean Water Act (Watershed Management Bureau) and Safe Drinking Water Act (Drinking Water and Groundwater Bureau). Pierce then outlined potential areas to improve this collaboration, including integrated watershed planning/implementation, and collaborating on water quality standards and monitoring. Pierce then displayed a chart outlining the number of public water systems (PWS) with and without active watershed plans, and the population served by each category of PWS. Steve Landry provided clarification on the chart, stating that not all watershed plans depicted in the chart are EPA-approved, 319 a-i plans. He stated that it is likely that less than five (5) of the fifteen (15) water systems with an active watershed plan are EPA-approved, 319 plans. Pierce then presented a slide that outlined EPA 319 plans and proposed that the Source Water Protection Program strive to target specific water supply water bodies for watershed plans or Total Maximum Daily Load (TMDL) studies. Jen Rowden wondered whether there are water systems for which a portion of their surface source of water is already covered through an existing EPA 319 plan. The consensus was that there likely are water systems that fit this scenario, but the exact number is unknown at the moment. Steve Landry noted that approximately 40 EPA 319 plans exist in total. Steve also noted that some groups are retrofitting pre-existing plans to match NHDES and EPA 319 guidelines. Steve further commented that even identification of TMDLs get a watershed plan very far along. If resources are limited, groups should focus on a TMDL study, a watershed plan can be effectively built off of that.

Pierce presented a slide introducing the idea of partnering with external organizations to leverage resources that can be used to monitor surface sources of water for parameters with the ability to affect drinking water treatment that are not currently being monitored. Tracie Sales mentioned that the Mascoma River Local Advisory Committee (LAC) is in the process of

developing their corridor plan. Tracie inquired as to whether other LACs work to include drinking water considerations in their corridor plans?

A slide was then presented that outlined a finding from the Association of State Drinking Water Administrators (ASDWA) survey. Specifically respondents were asked whether drinking water uses are supported by comprehensive numeric nutrient criteria. The result of the ASDWA survey was that drinking water uses are not supported by comprehensive numeric nutrient criteria. Pierce then explained that the drinking water designated use is supported as long as the water meets drinking water standards after adequate treatment. A discussion of the drinking water designated use ensued. The drinking water designated use is largely dependent on whether the technology or infrastructure exists to treat a contaminant, rather than the nature of the contaminant itself. For example, two source waters could have the same level of a specific contaminant. If one treatment plant has the ability to treat that contaminant, and the other does not, only the source water with the ineffective treatment would be impaired for the drinking water designated use.

Pierce then displayed slides related to source water monitoring and assessment. The discussion centered on monitoring and assessment being data-driven, rather than on an *ad hoc* basis. Karl Honkonen posited that it would be beneficial for water suppliers to know what condition their source water is in. John O'Neill reported that water systems are resource limited, and as a result are sometimes reluctant to engage in long-term monitoring projects. John further stated that there may often be a disconnect between NHDES and the water supplier, delaying or limiting the data that gets to the water supplier, if it is collected by DES or an associated volunteer organization. John further mentioned that monitoring undertaken by a water system is typically "reactive" rather than "proactive." Pierce used the next slide to highlight four (4) of the 11 NHDES Monitoring Strategy Objectives that were developed in 2014. This included 1) a report on the status of all surface water bodies, 2) a determination of the trends in important surface water quality indicators, 3) collection of data in support of water quality assessments, and 4) identification of the stressors that affect water quality.

Pierce displayed a slide intended to stimulate a discussion regarding monitoring and watershed plans. Mark Hemmerlein questioned whether it's possible to connect monitoring data to how it affects actions taken in the watershed. Pierce replied that it would likely be difficult, but the effects of monitoring would be realized when the data informs management decisions in the form of permitting requirements that are considered for development surrounding a water body. Mark also wondered whether the data collected as part of monitoring programs goes into the NHDES Environmental Monitoring Database (EMD). Steve answered that it could go into EMD, but not always. To be uploaded to the EMD, the data must be collected under an approved Quality Assurance Project Plan (QAPP). Pierce mentioned that the discussion

regarding the use and utility of monitoring data is a good question, but also a broad question and could potentially be addressed by the Regulatory work group.

Pierce presented a slide related to the updated 2015 Watershed Plan for Manchester Water Works (MWW), which provided a recommendation to revise their in-lake monitoring program to include a broader suite of parameters. Steve Landry inquired as to whether MWW participates in any volunteer monitoring programs, because if so, the data can be relatively easy to upload to EMD. John indicated that they conduct their in-lake monitoring in-house, and have done so for a while. John stated that MWW constructed an MS Access database to house their in-lake monitoring data. A slide was then displayed that highlighted surface water sources that lack current implementation of a watershed plan. Karl Honkonen mentioned that the lack of watershed plan implementation may be a capacity building issue, particularly for those surface sources that lack a Volunteer Lake Assessment Program (VLAP). Pierce concurred, and also mentioned that financial capacity is likely a limiting factor, as the creation of a watershed plan can cost $60,000 - $80,000 dollars, and even more (~$100,000) for larger watersheds like Lake Massabesic. Pierce then presented a series of slides that provided example parameters for a drinking water quality monitoring strategy, examples of numeric objectives for a surface water supply reservoir in New York, and presented parameters that could potentially affect drinking water treatment processes. These slides led to the question, outside of watershed planning, does the Source Water Protection Program need to craft recommendations for monitoring of source water quality parameters? Mark Hemmerlein asked if Manchester could discuss their in-lake monitoring procedures, as an example and to generate discussion. John O'Neill provided a brief summary of the types of monitoring conducted by MWW and what parameters are included.

Pierce then presented a series of slides related to the issue of nutrient loading in water bodies and associated issues, including eutrophication and harmful cyanobacterial blooms. A discussion of nutrient reduction through watershed planning/restoration ensued.

Pierce introduced the State Non-Point Source (NPS) Plan, which is currently in the process of being updated and should be completed by September 2019. The plan will set statewide NPS priorities according to certain criteria which are tallied and ranked for each waterbody. Pierce mentioned that few waterbodies that serve as drinking water supplies are identified as priorities for protection and restoration, and used this as an example for how the Source Protection Program could work to re-think the drinking water use designation to include raw water quality as a consideration, rather than drinking water "after adequate treatment." Steve Landry clarified that the program uses federal criteria when prioritizing sites for NPS protection, and that the goal of the program is to use funds to get water bodies delisted, and they have had seven (7) success stories as a result of this strategy. Pierce then questioned whether water

supplies are weighted enough in prioritization, and posed a question to the group regarding metrics that could be used to prioritize these sources. Steve stated that data from EMD is used to weigh drinking water sources in their prioritization efforts. A slide was presented that outlined the criteria used to prioritize water bodies for restoration, which prompted a discussion of how the Source Water Protection Program could work with the Watershed Management Bureau to integrate the SDWA and CWA. Steve stated that there are no longer 319 funds available to develop watershed plans, as these funds are used to implement components of watershed plans. This is the result of a rule change approximately 5 years ago. In the updated NPS plan, the Watershed Management Bureau plans to look for funding opportunities that can be used for watershed plan development. These opportunities may include 604(b) funds and State Revolving Fund (SRF) loans. For example, Littleton, NH is using an SRF loan (that provides principal forgiveness) to develop a watershed plan. This could be used as a template for other municipalities. Additionally, the Drinking Water and Groundwater Trust Fund could potentially be used for this purpose in the future.

Following this discussion, the meeting pivoted to the 2019 Farm Bill and the potential role it could play in drinking water source protection. Rick Ellsmore outlined some of the structure of the new Farm Bill, which has allotted 10% of funding for source protection efforts, which amounts to approximately $13 – 15 million per year for the state of NH. A single grant has a limit of $450,000. Rick sees the Source Water Protection Program playing the role of identifying high priority areas for Farm Bill funding. Rick also outlined some of the challenges associated with implementing the Farm Bill for source water protection in NH, including the diminishing number of dairy farms in NH, the match requirement for grantees and the lack of a state program to help with the required match, and the fact that vegetative buffers (between ag. fields and waterbodies) can be a hard sell for agricultural managers. Rick mentioned three (3) work areas in particular that could be eligible for Farm Bill funding that would likely garner support from the agricultural community and help with drinking water source protection: nutrient management, waste storage, and barnyard practices. The practice of field applications was brought up, and Rick mentioned that the United States Department of Agriculture (USDA) Farm Bill can help with implementation of Best Management Practices (BMPs), but cannot delve into compliance issues. Andrew Madison asked if the Farm Bill could also be applied to private forest owners, and Rick replied that it could be used to help implement forestry BMPs, such as logging timing (winter) and stream crossings. Karl Honkonen inquired as to whether these funds could be used to implement and monitor forestry BMPs during an active harvest. For example, funds could be used to have personnel from the NH Division of Forests and Lands (NHDFL) monitor for BMP compliance before, during, and after a harvest. John O'Neill mentioned that NHDES does have stream crossing requirements, but monitoring for compliance with those requirements falls to NHDFL, which is often resource limited. Karl mentioned that the state of New York has been subsidizing forestry BMP implementation

through the local environmental protection departments. Pierce highlighted two NHDES maintained datasets that could be used in source water protection prioritization by the USDA-Natural Resources Conservation Service (NRCS). Tyler Davidson will send the Source Water Protection Areas (SWPA) and High Priority Water Supply Lands (HPWSL) dataset to Rick Ellsmore at the conclusion of this meeting. John O'Neill noted an increase in hobby farms and horse farms in his watershed, as well as throughout the state, and inquired if this was on USDA's radar. Rick stated that they are, but there are some limitations. Horse farms typically do not gross the minimum in agricultural products to be technically considered an agricultural producer. Thus, many would not be eligible for funding. Rick stated that the application process for Farm Bill funds can be competitive and there is no guarantee of funding – approximately 200 applicants each year do not get funded. Rick closed the conversation by mentioning that outreach regarding the Farm Bill will be very important, as the USDA does not have staff to advertise the availability of funds.

After the USDA 2019 Farm Bill discussion, Pierce presented slides concerning the idea of expanding riparian forest buffer in threatened urban and suburban watersheds. Karl Honkonen described some of the work done by the United States Forest Service (USFS) in this area, including the 2014 Joint Chiefs' Landscape Restoration Project. An example provided was the Upper Susquehanna River in New York where a vegetative buffer was successfully implemented through the Joint Chiefs' Grant. Karl stated that the USFS works with private land owners and state agencies to manage forests to protect drinking water, which includes the development and implementation of forest management plans. Karl noted that the USFS cannot pay for protection, though the NRCS can. Regarding vegetative buffers, Rick Ellsmore stated that he has asked his management if there is any way to improve the appeal of vegetative buffers to agricultural managers, including a policy of "no net loss" of crop land. Rick stated further that positive impacts to water quality as a result of BMP implementation can come in small increments, making it difficult to show improvements. Steve Landry agreed with that idea, stating that they often have difficulty displaying watershed planning success stories solely through water quality. Rick followed up on this idea by stating that instead of water quality, an emphasis could be placed on the number of acres of land protected, the number of BMPs implemented, etc., rather than solely looking at water quality as the determinant of successful watershed planning/BMP implementation. Karl Honkonen also mentioned the USFS Landscape Scale Restoration Grants as a potential funding tool. These grants are announced in July and the grant round is closed in September. Eligibility requirements for this grant program include: consistency with the state forestry plan (as determined by the state forester), a 50/50 non-federal fund match (cash or in-kind), and the grants are limited to 5 successful applicants per state per year. Karl also mentioned that the NHDFL is currently updating their 5 year plan. Sue Francher at DFL is likely the contact for this work.

Pierce then transitioned the discussion to the role local organizations can play in source water protection. Specifically, Pierce discussed the role of local planning boards and the authority they have over development. Pierce also discussed the number of towns in NH with groundwater ordinances and used this to highlight the comparative lack of surface water overlay zones for municipalities to protect surface water sources. The idea of working with the Watershed Management Bureau and other organizations to further protections was introduced. The Piscataqua Region Estuaries Partnership (PREP) was highlighted as a group that has done substantial work to protect the water quality of Great Bay, and they were suggested as a model for other areas in NH to work to protect water quality. Pierce inquired as to whether the Source Water Protection Program should be focusing on buffer areas and working with partners to improve them. John O'Neill noted that buffers are a complex issue and can be challenging to municipalities. John cited the discrepancy between "setbacks" and "buffers" at the local level. John mentioned RSA 227-J (the "basal area law") and mentioned it is an effective law in part because it allows the public to report suspected violations. At this time, the discussion transitioned to the Municipal Separate Storm Sewer System (MS4) permit in NH. Jen Rowden noted that, at the local level currently, the new MS4 permit is a big driver for municipal efforts, and as such drinking water may not be playing as big a role. Pierce inquired as to how NH Department of Transportation (NHDOT) has been handling their MS4 requirements/prioritization. Mark Hemmerlein explained that they prioritize stormwater outfalls, primary contact areas (beaches), and drinking water supplies. These locations are sampled for parameters that can elucidate any cross-connections (i.e., bacteria, ammonia, conductivity, salinity, detergents, chlorine, etc.). Once collected, those data go into an NHDOT database. If any of the data is considered "abnormal," a catchment investigation is triggered. The process for assessing discharge locations was provided as follows: determine if the outfall is regulated, then determine if there is any flow in the outfall location, if there is flow – sample the outfall. If there is no flow, no need to sample. Jen Rowden noted that the final prioritization of outfalls is not due until 5 years from now. The next step for permittees is to identify preliminary discharges. Jen mentioned that many regional planning commissions have been using DOT funds as a resource. Jen noted further that a lot of planning commissions are using hotspot analysis to identify discharge locations. For identified discharges, the considerations for disconnecting the discharge relate to if the illicit discharge is impacting an impaired waterbody. The meeting then transitioned to a brief discussion regarding local ordinances and how they can promote source water protection.

Pierce then closed the meeting by reviewing the upcoming schedule for the next strategy update meetings and the next steps for the workgroup.